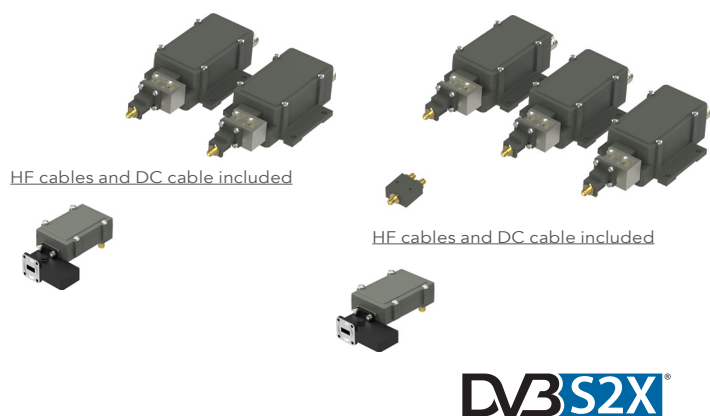


Dual/Triple PLL System

Receives two/three Ka-Bands simultaneously



The Ka-Band Dual/Triple Systems consists of Ka LNA Wideband with waveguide isolator, Ka splitter (Triple), Ka BDC's with waveguide isolators and matched Ka cables. Comes standard with Low Phase Noise to meet DVB-S2X Professional services profile.

Options include customized LO, customized frequency ranges, customized gain, separate DC power input and separate input for the external 10 MHz reference.

Features

- **NEW!** Optional Alarm output and M&C interface
- Auto switching LO ref: Internal / Ext. 10 MHz
- Wide frequency range
- Low Phase Noise
- High P1dB and IP3
- Wide operating temperature range

TECHNICAL SPECIFICATIONS

MODEL:	Dual Band System 18.20 - 20.20 GHz		Triple Band System 17.70 - 21.30 GHz		
Input Frequency	18.20-19.20 GHz	19.20-20.20 GHz	17.70-18.90 GHz	18.90-20.10 GHz	20.10-21.30 GHz
LO Frequency	17.25 GHz	18.25 GHz	16.75 GHz	17.95 GHz	19.15 GHz
Output Frequency	950-1950 MHz	950-1950 MHz	950-2150 MHz	950-2150 MHz	950-2150 MHz
Gain	60 dB typ. (55 dB min.)				
Flatness	±0.4 dB max. within 30 MHz ±2 dB max. over each band				
Noise Figure / Noise Temperature	1.8 dB / 149 K typ.				
Phase Noise	-35 dBc @ 10 Hz -65 dBc @ 100 Hz -80 dBc @ 1 kHz -85 dBc @ 10 kHz -95 dBc @ 100 kHz -112 dBc @ ≥1 MHz typ.				
Image Rejection	30 dB min.				
Input LNA	Waveguide WR 42 / R 220. Flange PBR 220.				
Input BDC	SMA-female 50Ω				
Input VSWR LNA	1.35:1 max. with isolator (included)				
LO Leakage	-60 dBm @ RF input				
Internal Ref. Stability	Auto switch Ext. 10 MHz ref. / Internal ±2.5 ppm				
External 10 MHz Ref.	Sine wave, Level: -10 to +10 dBm. Supplied through output connector				
Output P1dB	+15 dBm typ.				
Output IP3	+25 dBm typ.				
Output VSWR	1.7:1 typ.				
Output Connector	F-type 75Ω / N-type 50Ω / SMA-type 50Ω				
DC Input BDC	nom. +12 to +24 V, Supplied through output connector				
Power BDC	5 W max.				
Dimensions BDC	178 x 80 x 46 mm (F- & SMA-connector) 184 x 80 x 46 mm (N-connector) (for drawing, see www.smw.se)				
Weight BDC	399 g (F- & SMA-connector) 418 g (N-connector)				
DC Input LNA	nom. +12 to +24 V / 110 mA typ. Supplied through separate SMA connector (bottom side)				
Power LNA	1.32 W @ 12VDC 2.64 W @ 24VDC typ.				
Dimensions LNA	103 x 63 x 34 mm inclusive isolator,(for drawing, see www.smw.se)				
Weight LNA	160 g, inclusive isolator				
Temperature Range	Storage and operating: -40 to +80°C				
Optional Alarm BDC	Interface: Separate M8-connector (B), Open collector, Open on fault, 3.3 to 24 V, max. 200 mA Available Alarms: LO not locked, Total current consumption, Power detector outside limits, RF level outside limits				
Optional M&C BDC	Via MODBUS RTU RS485 electrical interface, see sep. document for details. NOTE! Mates with M8 male connector. Cable: shielded min. CAT 5				
Other options	Customized LO frequencies, input and IF ranges, gain and variation, Sep. 10 MHz ref. input (SMA), Sep. DC input (SMA)				
SEE THE RF OVER FIBER AND L-BAND SECTIONS FOR OUTPUT OPTIONS					

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Dual/Triple PLL System cont.

Example Ka-Band Dual System configurations					
P/N (x = connector type F, N or SMA)	Frequency range (GHz)	BDC	LO	Ka-band (GHz)	L-band (MHz)
55720x-V02 Autoswitch ext. 10MHz / ± 2.5 ppm	18.20 - 20.20	1	17.20	18.20-19.20	1000-2000
		2	18.20	19.20-20.20	1000-2000
55721x-V02 Autoswitch ext. 10MHz / ± 2.5 ppm	18.20 - 20.20	1	17.25	18.20-19.20	950-1950
		2	18.25	19.20-20.20	950-1950

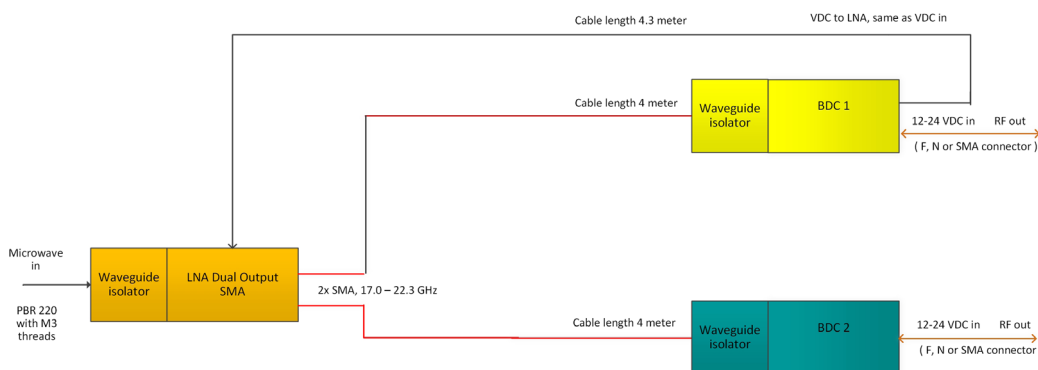
Example Ka-Band Triple System configurations					
P/N (x = connector type F, N or SMA)	Frequency range (GHz)	BDC	LO	Ka-band (GHz)	L-band (MHz)
55751x-V02 Autoswitch ext. 10MHz / ± 2.5 ppm	17.70 - 21.30	1	16.75	17.70-18.90	950-2150
		2	19.15	20.10-21.30	950-2150
		3	17.95	18.90-20.10	950-2150
55741x-V02 Autoswitch ext. 10MHz / ± 2.5 ppm	17.30 - 20.90	1	16.35	17.30-18.50	950-2150
		2	18.75	19.70-20.90	950-2150
		3	17.55	18.50-19.70	950-2150

NOTE P/N: x = "0" for F connector, "5" for N connector and "8" for SMA connector

Ka Dual Band system



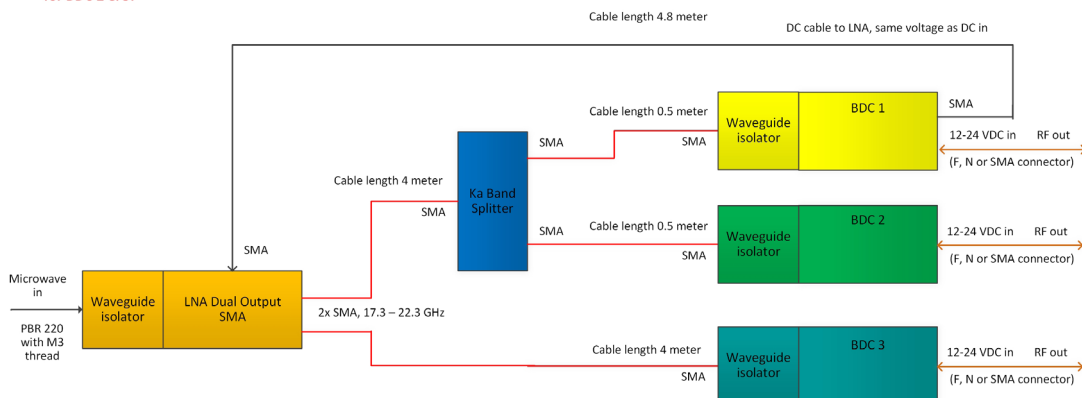
NOTE: Cable lengths are fixed due to best performance of this system. If other cable lengths are needed, please contact us first. Read our Product catalogue for more technical details.



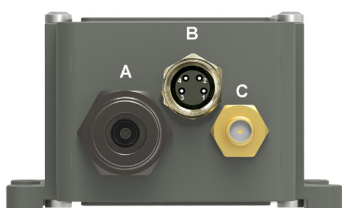
Ka Triple Band system



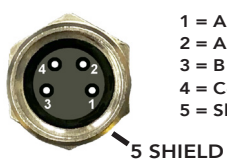
NOTE1: Cable lengths are fixed due to best performance of this system. If other cable lengths are needed, please contact us first. Read our Product catalogue for more technical details. **NOTE2:** Frequency bands are not in order for BDC 2 & 3.



BDC rear connectors



Connector B (opt.)



- 1 = Alarm. open coll.
- 2 = A pos+, RS485
- 3 = B neg-, RS485
- 4 = Common (GND)
- 5 = Shield

Connector A (standard)

Type: N-f, (option F-f or SMA-f)
Functions: L-Band out, DC in,
External 10 MHz in

Connector B (optional)

Type: M8 female, 4 pin,
A coded
Functions: Alarm and M&C

Connector C (optional)

Type: SMA-f only
Functions: Ext. 10 MHz in
or DC input

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